

REMARKS

In the Office Action, claims 10-12, 18 and 19 were withdrawn from consideration and claims 1-9, 13-17 and 20 were rejected. By this Reply and Amendment, claims 1, 2, 3, 13 and 14 have been amended, and claims 1-9, 13-17 and 20 remain pending in the present application. All claim amendments are fully supported throughout the description and figures of the specification. No new matter has been added.

In the Office Action, Applicant was required to elect a single disclosed species for prosecution on the merits. The provisional election made via telephone on March 9, 2006 is hereby confirmed, and claims 10-12, 18 and 19 can be withdrawn from further consideration as being drawn to a non-elected invention.

Claims 1-2 and 13-14 were rejected under 35 USC 102(b) as anticipated by the Kneisl et al. reference, US Publication No.: 2002/0189482. Independent claims 1, 2, 13 and 14 have been amended to clarify certain aspects of the claim language and are believed patentable over the cited reference.

The Kneisl et al. reference describes a debris free perforating system. Shaped charges 1 are housed within a loading tube 22. A jacket 24 secures the shaped charges to the loading tube 22 and maintains the orientation of the shaped charges. As with conventional systems, the shaped charges 1 and jackets 24 are inserted into the loading tube 22 until jackets 24 shoulder against loading tube shoulders 23. (See paragraphs 0019 and 0020). However, the reference does not disclose or teach the use of any type of mechanism to enable the loading of shaped charges having a different size than that for which the loading tube and jackets were designed.

Accordingly, the Kneisl et al. reference fails to disclose a variety of elements recited in the amended, independent claims at issue. For example, the reference fails to disclose or suggest "an adapter adapted to receive and mount a shaped charge of a selected size" into a jacket of the loading tube where the jacket is formed to hold shaped charges "of a size larger than the selected size" as recited in amended, independent claim 1. Similarly, the reference fails to disclose or

suggest a holder mechanism adapted to receive a first shaped charge of a selected size and a loading tube having a mounting mechanism adapted to connect a second shaped charge having a size larger than the first shaped charge, where the holder mechanism is "configured for connection to the mounting mechanism for mounting of the first shaped charge in the loading tube" as recited in amended, independent claim 2. The reference further fails to disclose or suggest a method comprising "using a holder to mount a shaped charge of a selected size into a standard jacket of a loading tube" in which the standard jacket is designed to hold "charges of a size larger than the selected size" as recited in amended, independent claim 13. Again, the reference fails to disclose or suggest providing a standard loading tube with a standard jacket mechanism "for receiving shaped charges of a particular size" larger than a small shaped charge, and "inserting the small shaped charge into an adapter, and installing the adapter into the standard jacket mechanism of the loading tube" as recited in amended, independent claim 14. Accordingly, independent claims 1, 2, 13 and 14 are patentable over the cited reference.

Claims 1-4, 9 and 15 were rejected under 35 USC 102(b) as anticipated by the Lussier et al. references, US Patent No.: 5,648,635. Independent claims 1 and 2 have been amended to clarify certain aspects of the claim language and are believed patentable over the cited reference. Independent claim 15 has not been amended but is believed patentable over the cited reference, as discussed below.

The Lussier et al. reference describes a perforating gun system that uses shaped charges 22 which are each formed by a charge case 24 filled with an explosive 26 held by a liner 28. The charge case also has a rubber jacket 34 that includes an initiation cord holder hole 36. (See column 6, lines 42-49). It should be noted that hole 36 is not a lower section connectable with an upper section as described in the Office Action. The charge case 24 is affixed against outward radial movement from a perforating gun tube by tabs 102. (See column 7, lines 42-46). However, the reference does not disclose or teach any type of mechanism to enable the loading of shaped charges having a different size than that for which the perforating gun is specifically designed.

Accordingly, the Lussier et al. reference fails to disclose a variety of elements recited in the subject rejected claims. For example, the reference fails to disclose or suggest "an adapter adapted to receive and mount a shaped charge of a selected size" into a jacket of the loading tube where the jacket is formed to hold shaped charges "of a size larger than the selected size" as recited in amended, independent claim 1. Similarly, the reference fails to disclose or suggest a holder mechanism adapted to receive a first shaped charge of a selected size and a loading tube having a mounting mechanism adapted to connect a second shaped charge having a size larger than the first shaped charge, where the holder mechanism is "configured for connection to the mounting mechanism for mounting of the first shaped charge in the loading tube" as recited in amended, independent claim 2. The reference also fails to disclose or suggest a housing assembly having "an upper section and a lower section connectable together to define an outer surface and a bore therein, the outer surface being adapted to engage a jacket in a loading tube" as recited in independent claim 15. The hole 36 disclosed in the Lussier et al. reference can not be relied on as teaching the recited "lower section" as stated in the Office Action, page 5.

Claims 3, 4 and 9 ultimately depend from independent claim 2. Accordingly, these dependent claims are patentable over the cited reference for the reasons provided above with respect to amended, independent claim 2 as well as for unique subject matter recited in the dependent claims.

Claims 2, 3 and 20 were rejected under 35 USC 103(a) as unpatentable over the Parrott et al. reference, US Patent No.: 4,960,171 in view of the Kneisl et al. reference. This rejection is respectfully traversed, however amendments have been made to independent claim 2 to clarify the claim language.

The Parrott et al. reference describes a perforating gun 12 having a gun carrier 12a in which a loading tube 12b is disposed. Shaped charges 10 are disposed within the loading tube and phased in different directions. (See column 5, lines 16-22). The Parrott et al. reference and the Kneisl et al. reference are similar in that they both show a jacket type mechanism by which conventional shaped charges are mounted to a loading tube. However, the references, taken alone or in combination, do not disclose various elements of the subject claims.

For example, the references, taken alone or in combination, fail to disclose or suggest a holder mechanism adapted to receive a first shaped charge of a selected size and a loading tube having a mounting mechanism adapted to connect a second shaped charge having a size larger than the first shaped charge, where the holder mechanism is "configured for connection to the mounting mechanism for mounting of the first shaped charge in the loading tube" as recited in amended, independent claim 2. The references also fail to disclose or suggest elements of independent claim 20 including a shaped charge holder comprising a housing having an outer surface "adapted to engage a jacket in a loading tube" and an inner bore "adapted to receive a shaped charge" to enable the mounting of smaller shaped charges in standard jackets of loading tubes designed for larger shaped charges. Accordingly, independent claims 2 and 20 are believed patentable over the cited references.

Claim 3 depends from independent claim 2. Accordingly, claim 3 is patentable over the cited references for the reasons provided above with respect to amended, independent claim 2 as well as for unique subject matter recited therein.

Claims 5-7 and 17 were rejected under 35 USC 103(a) as unpatentable over the Lussier et al. reference in view of the Kneisl et al. reference. This rejection is respectfully traversed, but claims 5-7 and claim 17 ultimately depend from independent claims 2 and 15, respectively. Accordingly, these dependent claims are patentable over the cited references for the reasons provided above with respect to the corresponding independent claims as well as for the unique subject matter found within these claims. The combination of the Lussier et al. and Kneisl et al. references fails to provide any new teaching that would render obvious claims 5-7 and 17.

Claim 8 was rejected under 35 USC 103(a) as unpatentable over the Lussier et al. reference in view of the Kneisl et al. reference and further in view of the Parrott et al. reference. This rejection is respectfully traversed. However, claim 8 ultimately depends from independent claim 2. Accordingly, claim 8 is patentable over the cited references for the reasons provided above with respect to independent claim 2 as well as for the unique subject matter recited in

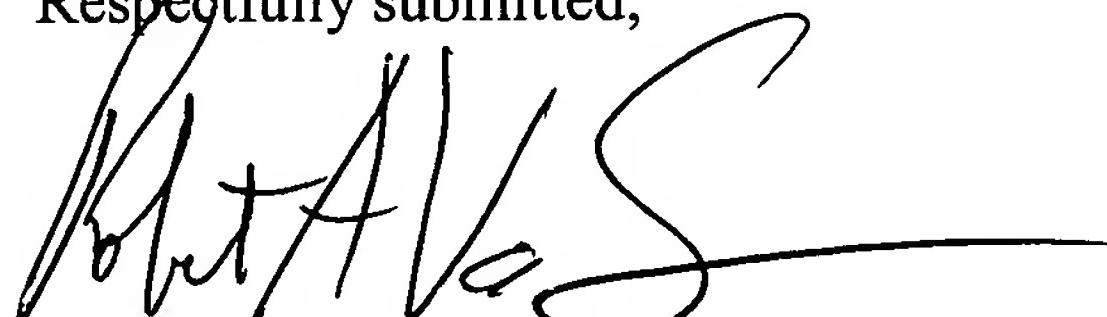
claim 8. The combination of the Lussier et al., Kneisl et al. and Parrott et al. references fails to provide any new teaching that would render obvious the subject matter of claim 8.

Claim 16 was rejected under 35 USC 103(a) as unpatentable over the Lussier et al. reference in view of the Parrott et al. reference. This rejection is respectfully traversed. However, claim 16 ultimately depends from independent claim 15. Accordingly, claim 16 is patentable over the cited references for the reasons provided above with respect to independent claim 15 as well as for the unique subject matter recited in claim 16. The combination of the Lussier et al. and Parrott et al. references fails to provide any new teaching that would render obvious the subject matter of claim 16.

In view of the foregoing remarks, the pending claims are believed patentable over the cited references. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Date: June 21, 2006

Respectfully submitted,



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